

CLEAN AMENDED SHEET

ART 34 AMDT

C L A I M S

5 1. Swirl tube separator for separating solids from a
gas-solid containing feed comprising a tubular housing,
an axial inlet for introducing a gas-solids mixture at
one end of said housing, wherein said axial inlet for
introducing the gas-solids mixture is provided with
10 swirl imparting means, a solids outlet opening at the
opposite end of said housing, and a co-axial positioned
tubular gas outlet conduit placed at an end of said
housing such that the solids outlet opening is
positioned in the space between the tubular gas outlet
15 conduit and the wall of the tubular housing, wherein
along the axis of the tubular housing a vortex extender
pin is present.

20 2. Swirl tube separator according to claim 1, wherein
the pin is present along at least 20% of the axis of the
tubular housing, said axis running from the inlet
opening of the gas outlet conduit up to the end of the
tubular housing opposite said gas outlet conduit.

25 3. Swirl tube separator according to claim 2, wherein
the pin is present along at between 30 and 100 % of the
axis of the tubular housing.

30 4. Swirl tube separator according to claim 3, wherein
the pin is present along 100 % of the axis of the
tubular housing.

35 5. Swirl tube separator according to any one of claims
1-4, wherein the pin extends from the interior of the
gas outlet conduit into the tubular housing and wherein
the pin is fixed within the gas outlet conduit by means

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- 5 of supporting means, said supporting means are swirl means which swirl means are positioned such that they decrease the swirling motion of the gas being discharged via the gas outlet conduit.
- 10 6. Swirl tube separator according to any one of claims 1-5, wherein the inlet for introducing the gas solids mixture and the gas outlet conduit are arranged at one end of the tubular housing and the solids outlet opening is positioned at the opposite end of said housing.
- 15 7. Multi separator provided with a plurality parallel operating swirl tube separators according to any one of claims 1-6.
8. Process to separate solids from a solids laden gaseous mixture having a solids content of between 100 and 500 mg/Nm³ to obtain a gaseous stream containing less than 50 mg solids per Nm³ in a swirl tube separator according to any one of claims 1-6 or in a multi separator according to claim 7.